THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte GASTON A. VANDERMEERSSCHE
AND STEPHEN M. DICKE

_____

Appeal No. 95-3026
Application 07/945,061[1]

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ON BRIEF

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Before HAIRSTON, BARRETT, AND FLEMING, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

[1] Application for patent filed September 15, 1992.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 20.

The disclosed invention relates to a method and apparatus for testing a specimen for resistance to abrasion. The specimen is optically scanned prior to abrasion to produce a first array of pixels representing the specimen. After abrasion, the specimen is optically scanned again to produce a second array of pixels representing the specimen. A plurality of difference values of corresponding pixels are produced to quantify the abrasion of the specimen.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A method of testing a specimen for resistance to abrasion, steps of which comprise:

optically scanning the specimen prior to abrasion to produce a first array of pixels representing the specimen;

abrading the specimen;

optically scanning the specimen after the abrading to produce an second array of pixels representing the specimen;

producing a plurality of difference values, each one of which indicates a degree of difference between corresponding pixels in the first and second arrays; and

quantifying the abrasion of the specimen from the plurality of difference values.

The references relied on by the examiner are:

Vandermeerssche	4,507,953	Apr. 2, 1985
Yamazaki et al.(Yamazaki) (Japanese Kokai)	3-44542	Feb. 26, 1991

Vandermeerssche, "'The Pressure Is On' . . . The Packaging Professional Is Facing New Challenges!," Journal of Packaging Technology, Vol. 1, No. 3, June 1987.

Gonzalez et al. (Gonzalez), "Digital Image Processing," Addison-Wesley, 1992, pages 318 through 320.

Claims 1 through 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Vandermeerssche patent in view of the Vandermeerssche publication,[2] Yamazaki and Gonzalez.[3]

Reference is made to the brief and the answer for the respective positions of the appellants and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejection of claims 1 through 20.

The Vandermeerssche patent is described in the Background of the Invention (specification, pages 1 and 2) as disclosing a

[2] Although the Vandermeerssche publication is used in the grounds of rejection, it is not listed under the prior art of record (Answer, pages 2 and 3).

[3] Although Gonzalez is not listed in the opening statement of the rejection, it is used thereafter in the body of the rejection (Answer, pages 3 and 4).

testing machine that permits rubbing between two specimens to test the abrasion resistance of coatings applied to the two specimens. The amount of abrasion to a specimen had to be visually determined by an observer. Vandermeerssche states (publication, page 2, column 2) that "[i]n order to evaluate the level of abrasion resistance *in an accurate and reproducible fashion* a new method is urgently needed." According to Vandermeerssche, the state of the art in abrasion testing is an instrument referred to as the *"Comprehensive Abrasion Tester"* (publication, page 3, column 2). The testing apparatus described in both the patent and the publication by Vandermeerssche do not use pre-abrasion and post-abrasion pixel analysis.

In Yamazaki, an image from paper 41 is picked up by image pickup camera 2, and the camera creates an image signal that is 512 pixels x 512 pixels. The pixels are analyzed by the CPU 50 in the electrical processing unit 100. Yamazaki is silent concerning a comparison of the image signal with an earlier made image signal from the paper.

Gonzalez was merely cited by the examiner (Answer, page 4) for a teaching of computing "the root-mean-square error

(difference) between two images." Gonzalez describes (page 319) a "root-mean-square (rms) error between an input and output image."

Appellants argue throughout the brief that the applied references neither teach nor would they have suggested to one of ordinary skill in the art producing separate arrays of pixels representing the same specimen at two different times for before and after abrasion analysis. We agree. Accordingly, the obviousness rejection is reversed.

DECISION

The decision of the examiner rejecting claims 1 through 20 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
LEE E. BARRETT Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
MICHAEL R. FLEMING Administrative Patent Judge	)	

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